



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,802	12/21/2001	Toshiaki Fujii	KAW 98-2018-C	5368
23413	7590	03/01/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			KEENAN, JAMES W	
			ART UNIT	PAPER NUMBER
			3652	
DATE MAILED: 03/01/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/036,802	Applicant(s) FUJII ET AL.	
	Examiner James Keenan	Art Unit 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, lines 15-16, the recitation that "the door ... and the cover are unified" is a positive recitation of an element (the door of the movable stage) which is merely inferentially set forth as part of a *wherein* clause. Thus it is unclear whether the scope of the claim is directed to the combination of the container and stage or just the subcombination container. Because elements of the movable stage are positively recited in the body of the claim, the scope thereof is considered to be directed to the combination, even though the preamble is directed only to a "container".

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 11-17, and 19-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muka et al (US 5,613,821) in view of Briner et al (US 5,810,537) and Mastroianni (US 6,068,668), all previously of record.

Muka shows a container 32 for receiving dust free articles therein and which is mountable on a loader 60 such that the entire container remains in a low cleanliness room while a cover 42 to be removed from the container faces a high cleanliness room 22, wherein the loader comprises an opening portion 78 disposed in the low cleanliness room in a border location between the high and low cleanliness rooms and a door 80 for opening and closing the opening portion, and further wherein the container comprises an opening port 38 through which the article is transferred to the high cleanliness room, the cover 42 is unified with the door 80 in the low cleanliness room and moves with the door to open and close the opening portion, and a fixing means 50-56 (fig. 5) fixes the cover to the port when the article is enclosed in the container.

The high cleanliness room is not disclosed as having a higher pressure than the low cleanliness room, nor is a gap around to door to allow air to flow from the high pressure, high cleanliness room.

Briner shows loader 10, stage 12 with movable lift ring 16, container 36 with cover 38, and door 26 in opening portion of wall 24 that separates a low cleanliness room from a high cleanliness room, wherein the high cleanliness room has a higher pressure than the low cleanliness room.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified Muka such that the high cleanliness room had a higher pressure than the low cleanliness room, as suggested by Briner, as a means of preventing contamination.

Briner additionally shows the door to have "a slight air gap around its periphery" between it and the opening portion through which air flows out from the high cleanliness room (col. 5, lines 3-19). To have included this additional feature in the apparatus of Muka would have been obvious to further reduce contamination.

Muka also does not show a horizontally movable stage.

Mastroianni shows shuttle 28 for horizontally moving container 38 toward and away from a load port of a wafer processing apparatus. This is disclosed as a desirable alternative to systems without a movable stage.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified Muka by utilizing a driver to move the stage horizontally, as shown by Mastroianni, to enable easier and more precise loading of the container at the load port.

Re claims 11, 26, and 33, note front cover 70 of Muka.

Re claims 12, 17, 25, and 31, see figure 9 of Muka.

Re claims 14 and 22, although Muka does not show the container to include a protrusion with a hole in which a pin is inserted to unify the cover and door, a similar structure including recess 186 into which fingers 194 are inserted is shown in figures 13-15. it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Muka by utilizing a protrusion with a hole in place of the recess, as this would simply be an alternate equivalent design expediency.

Re claim 19, note seal 48 (fig. 5) of Muka.

Re claim 20, note feet 66 (fig. 3) of Muka.

Re claim 21, absent any structural limitations, any portion of the outside of the container of Muka can be considered a "handle".

Re claims 23 and 28, although Muka does not explicitly teach an air cleaning device, the addition of such a feature is considered an obvious design expediency, in light of the fact that: a) Muka is used in a clean environment, and b) such devices are generally well known in this art, particularly since no structural details are recited.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muka et al in view Briner and Mastroianni, as applied to claim 16 above, and further in view of Bonora et al (US 5,895,191), previously of record.

Muka as modified does not show the angle between the cover and surface to form an acute angle.

Bonora, as previously described in prior Office actions, shows this feature.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Muka by forming the claimed angle as an acute angle, as suggested by Bonora, as this would simply be a well known and art recognized manner of connecting a cover to a container.

6. Applicant's arguments filed 12/27/05 have been fully considered but they are not persuasive.

Applicant argues that Muka, Briner, and Mastroianni show SMIF rather than FOUP systems. This is not only factually wrong but immaterial. First, only Briner shows

a SMIF system. Muka and Mastroianni mention SMIF systems only when referring to the prior art. Their systems are alternatives to SMIF systems, and, even though not explicitly named as such, are in fact substantially identical to FOUP systems.

Furthermore, regardless of whether SMIF, FOUP, or any other type of system is shown is immaterial because the claims are not limited to nor do they preclude any particular type of container system.

Applicant also argues that the Muka and Mastroianni references fail to show the unifying means in the low cleanliness room. However, the claims simply refer to “low cleanliness” and “high cleanliness” rooms, with no definitions or other limitations set forth. Therefore, nothing in the claims regarding this feature distinguishes over the references. Furthermore, both references show the unifying means exposed, at least some of the time, to the surrounding environment. Note in Muka, for example, that there is no outer door for the opening in wall 70. Only when the carrier is placed on the stage is this opening closed (by the door 42 of the carrier) and only then is the “mini-environment” sealed. However, note that door 80 is a load lock door which separates load lock 76 from the mini-environment (and the surrounding low-cleanliness environment). Thus, even though the mini-environment may be somewhat cleaner than the surrounding environment, it is still a “low cleanliness room” when compared to the “high cleanliness” load lock. Mastroianni shows a similar system (note esp. fig. 4).

Applicant also argues that Briner fails to teach a horizontally movable stage or a unifying means in the low cleanliness room. However, Briner was not cited for these features, which Muka and/or Mastroianni show, as noted above, but rather for the high

Art Unit: 3652

pressure in the high cleanliness room and a gap around the door which allows the high pressure air in the high cleanliness room to flow to the low cleanliness room.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

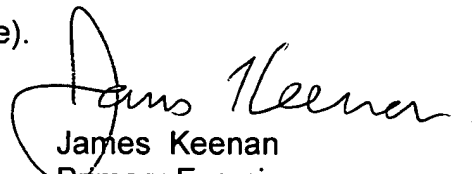
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 571-272-6925. The examiner can normally be reached on (schedule varies).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eillen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James Keenan
Primary Examiner
Art Unit 3652

jwk
2/22/06